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Research Article

Factors Associated with the Use of Modern Contraceptive Methods by Women in Marital Union in the City of Lubumbashi, Democratic Republic of the Congo: Cross-Sectional Study

Matungulu MC, Ntambue MA*, Ilunga KS, Musau NA, Ilunga MT and Malonga KF
Ecole de Sante Publique, Universite de Lubumbashi, Lubumbashi, Democratic Republic of the Congo

*Corresponding author: Ntambue MA, Hôpital Sendwe, Lubumbashi, Democratic Republic of the Congo

Abstract

Introduction: This study aimed to determine the prevalence of modern contraception and to identify factors that are associated with the use of modern contraceptive methods in the city of Lubumbashi.

Methods: We conducted a cross-sectional study from April to June 2015, with women in marital union in the city of Lubumbashi, where a sample was drawn. The sampling strata helped us to select households where women were interviewed; Data were collected by interview guided by a questionnaire; tests of Pearson chi-square, at the 5% risk threshold and the prevalence ratio and confidence interval 95% allowed us to determine the association. The Excel and the State software v13.1 helped us to analyze.

Results: In total 1096 women responded to our questions. The modern contraceptive prevalence was 28.4%. The use of modern methods predictors were age of women ≥ 30 years, the level of university study, the Catholic religious denominations, Protestant, Muslim and Kimbanguistes, formal occupations such as public company, public service and private company, owning a radio and possession 4-5 living children, the high level of knowledge of the methods, the positive attitude, the current discussion with spouses and spousal support.

Conclusion: The modern contraceptive prevalence was low. Some socio demographic, cultural and obstetric characteristics could be promoted in order to boost the use of modern methods in the city of Lubumbashi.

Keywords: Family Planning; Contraception; Contraceptive Methods; Contraceptive Prevalence

Abbreviations

CI: Confidence interval; DHS: Demographic and Health Survey; DRC: Democratic Republic of Congo; IUD: Intra uterine dispositive; LAM: Lactational Amenorrhea Method; OR: Odd ratio; Ora: Adjusted odd ratio; PR: Prevalence ratio; TV: Television

Introduction

Family planning is one of the essential components of primary health care and reproductive health, to improve maternal, newborn and child, by reducing morbidity and mortality in this category and the transmission of HIV/AIDS [1]. Contraception could prevent around 104,000 maternal deaths each year, either 29% of reduction [2]. It can also reduce child mortality by almost 10%, if it is available to all who need it [3].

Democratic Republic of Congo (DRC), as many countries in Sub-Saharan Africa [2,4], is characterized by a low use of modern contraceptive methods, although it is among the countries with very high rates of maternal and infant mortality. The maternal mortality ratio is estimated at 549 per 100 000 live births; so a woman of 29 is at risk of dying of maternal causes during childbearing age [5].

Recents results [6] on infant mortality are reporting 97 deaths per 1,000 live births and an under-five mortality rate of 158 per 1000 live births. The total fertility rate stands at 6.6 children per woman for the rural and urban areas and 5.4 children in urban areas [7]. This shows the lack of fertility control as it assumes that Henry quoted in the report of the DHS-DRC 2007 [5].

Since 1970, the DRC is characterized by growth rates among the highest in the world at more than 3% [5]. And it established that the rapid growth of the population (> 2%) and high fertility are a threat to the wellbeing of individuals and the poorest societies in developing countries [8]. In DRC, seven out of ten households are poor [9]. The modern contraceptive prevalence was 5.4% in 2010 [6]. The results of the Demographic and Health Survey 2013 show a prevalence of 8% for the whole country, and 15% in urban areas against 5% in rural areas [7]. It shows a very small progress. Therefore, the national government has committed to increase modern contraceptive prevalence to 19% across the country on a deadline from 2014 to 2020 [10]. The same document reveals that the coverage for family planning activities is low in the country.

Lubumbashi located in the southeast of the province of Haut

Table 1: Socio demographics Characteristics of women.

Variables	Frequency	Percent
Age (years)		
≤24	170	15.5
25-29	285	26.0
30-34	260	23.7
35-39	198	18.1
40-44	142	13.0
45 -49	38	3.5
No know	3	0.3
Matrimonial status		
Monogamy	974	88.9
Polygamy	122	11.1
Education level		
None	3	0.3
Primary	286	26.1
Secondary	644	58.8
University	163	14.9
Religion		
Catholic	315	28.7
Protestant	315	28.7
Islam	67	6.1
Kimbaguiste	41	3.7
Revivalist churches	358	32.7
Occupation		
None/household	679	62.0
Sale (liberal)	264	24.1
Public company	33	3.0
Public service	94	8.6
Private entePRrise	26	2.4
Possession of radio		
Yes	839	76.6
No	254	23.2
Refusal	3	0.3
Possession of TV		
Yes	830	75.7
No	263	24.0
Refusal	3	0.3

Table 2: Obstetrical characteristics.

Variables	Frequency	Percent
Living children		
≤3	590	46.3
4-5	430	39.2
≥6	159	14.5
ideal children		
≤3	243	22.2
4-5	361	32.9
≥6	450	41.1
Indecisive	42	3.8
Number of grow		
≤3	433	39.5
4-5	411	37.5
≥6	252	23.0
Age of women at first marriage		
≤14	25	2.3
15 - 19	334	30.5
20 - 24	605	55.2
25 - 29	120	10.9
30 - 34	4	0.4
No know	8	0.7

Materials and Methods

We conducted a cross-sectional study in analytical designs, from April to June 2015. It covered all women of childbearing age (15 to 49) in a conjugal relationship of the city of Lubumbashi, where a sample was drawn through the following formula: $n = z^2 pq / d^2$.

The sampling strata allowed us to select households, within which, women aged 15 to 49 were interviewed. The Health Zones (the local health system) were considered strata, whose numbers amounted to six (Tshamilemba, Kamalondo, Katuba, Mumbunda, Kenya and Kisanga). The selection of this health zone was done by simple random. In each stratum, an allocation proportional to the size of the area of Health (under layers) was performed. With simple random, avenues and street have been selected and the first household to investigate should be located in a parcel in the middle of the avenue, and the way forward on the avenue was determined by the pointed part of pen after that it was torn down. In the event that a parcel was inhabited by more than one household, one was pulled by simple random.

With a pre-tested and validated questionnaire, we collected data through interviews. A team of investigators was recruited and trained before descending into households to administer the questionnaire consisted of the following: Characteristics of Households and Housing, identity of the woman and spouse, fertility, information on contraceptive methods, knowledge of methods, use of contraceptive methods.

Data analysis

The descriptive part was to describe the socio demographic

Katanga (formerly Katanga), is the capital of this province. Its area of 747 km² of which 140 km² urbanized, its estimated population by end of 2006 to 1.5 million inhabitants of which about 1.4 million live in the urbanized part (a density of 10 000 inhabitants / km2) make it the second city DRC, after Kinshasa the capital [11]. No information source can learn about the determinants of the use of modern contraceptive methods in Lubumbashi. The objective of this study was to determine the modern contraceptive prevalence and identify factors that are associated with the use of contraceptive methods in the city of Lubumbashi.

characteristics of our respondents, obstetric history, knowledge of methods, use and non-use of contraception; this description generated percentages, mean and standard deviation. The analytical part, for its part, consisted of the search for associations between the use of modern contraceptive methods and predictors of the use of these modern methods: this is the univariate analysis. To do this, the test chi-square of Pearson, the risk level of 5% was used [12]. The association was determined by the prevalence ratio test and confidence interval of 95% [13].

Dependent variable

We considered as part of this study, the use of modern contraceptive methods as the dependent variable is dichotomous: use (yes = 1) and not using (No = 0). For modern contraceptive method, we considered the following methods: male condoms, pills, injectable (depo provera), implants, IUD, tubal ligation, spermicidal because they were the only ones cited by women.

Independent variables

We have retained predictors of the use of contraception following factors: age, marital status, level of education, religion, occupation of women, possession of radio, possession of Television (TV), number of living children, attitude of women face methods, level of knowledge of contraceptive methods (low: knowledge of one modern methods, average: knowledge of two methods and high: knowledge of three modern methods or more), discussion with the spouse, support spouse. We used the Excel software to encode data and the Stata Version 11 to perform analyzes.

Results and Discussion

A total of 1096 married women have answered our questions, a response rate was 97, 8%. An analyze data has revealed the mean of age for women was 31.7 ± 7 years; the less old was 14 years and the oldest was 49 years old. However, 0.3% of women did not know their age. More than ¾ of women were in a monogamous union. We found that over half (58.8%) had secondary level of study; by contrast, 0.3% of women had never attended school. The results showed that 32.7% of respondents had such denomination wake churches. More than half (62.0%) of women did not have an income-earning activity; they cared only for their households. We noticed that 76.6% of women had a radio, and 75.7% had a viewfinder TV in their households (Table 1).

As for obstetric characteristics (Table 2), the results showed that 46.3% of women had less than 3 children against 14.5% who had six or more. In contrast, 41.1% of women said they wanted to have 6 or more children against 22.2% who wanted to have three at most; 23% of women have already designed six or more pregnancies. In connection with the woman's age at first marriage, we observed that the mean was 20.9 ± 3.2 years (Minimum: 12 years; Maximum: 33 years).

The results tell us that the majority of women had a positive attitude (64.1%) face methods, against 35.5% of women who did not approve of modern contraception. Nearly half of women had a high level of knowledge (49%) methods (knew at least three), against 24.2% who knew only one method. It also results show that 41.3% of women currently discussing with their partners about the methods, against 22.7% who never discussed. However, the majority of women (54%)

Table 3: Attitude, Knowledge and utilization of modern contraceptives methods.

Variables	% (n=1096)
Attitude of women	
Favorable	64.1
No favorable	35.5
Neutral	0.4
Level of knowledge	
Low	24.2
Average	26.8
Light	49.0
Discussion with spouse	
Frequently	41.3
Rarely	36.0
Never	22.7
Support of spouse	
Yes	46.0
No	54.0
Utilization of methods	
No	71.6
Yes	28.4

Table 4: Methods used.

Method	% (n=1096)
Male condom	4.8
Pill	12.9
IUD	4.7
Spermicide	0.1
Injectable	1.7
Implant	3.9
Tubal ligation	0.2
LAM	7.5
Periodic continence	3.8
Interrupt Coït	5.5
None or popular method	71.6

did not have the support of their spouses against the use of modern contraceptive methods. The modern contraceptive prevalence among women surveyed was 28.4% (Table 3).

The methods used (Table 4) were the male condom (4.8%), the pill (12.9%), IUD (4.7%), injectable (1.7%), the implant (3.9%), spermicide (0.1%); tubal ligation (0.2%). Barriers to the use of modern contraceptive methods were the disapproval of the methods by women (9.1%) and the partner (21.3%), fear of side effects (12.3%), the ignorance methods (10.2%) and the religious prohibition (3.3%), the desire of maternity (25.9%), and no reason (17.4%).

Search determinants using modern methods (Table 5) showed that women with ages between 30 and 34 years, were more likely to use modern contraceptive methods than their older pairs 24 or less; those who were aged between 35 and 39 years, had four times the

Table 5: Determinants of utilization of modern contraceptives methods.

Variables	Total	Utilization of method	PR	95%CI	p
Age (years)					<0.001
≤ 24	170	10.6	1		
25-29	285	16.8	1.6	0.9–26	
30-34	260	18.8	1.8	1.1–3.0	
35-39	198	43.9	4.2	2.6–6.6	
40-44	142	62.0	5.9	3.7–9.2	
45-49	38	55.3	5.2	3.1–8.8	
Matrimonial status					0,32
Monogamy	974	28.9	0.9	0.8–1.1	
Polygamy	122	24.6	1		
Education level					0.03
Primary	289	26.0	1		
Secondary	644	24.7	0.9	0.7–1.2	
University	163	47.2	1.8	1.4–2.4	
Religion					<0.001
Catholic	315	34.0	2.3	1.7–3.0	
Protestant	315	35.9	2.4	1.8–3.2	
Islam	67	32.8	2.2	1.4–3.3	
Kimbaguiste	41	36.6	2.4	1.5–3.9	
Revivalist churches	358	15.1	1		
Occupation					<0.001
Household	679	25.5	1		
Liberal	264	17.4	0.7	0.5–0.9	
Public company	33	48.5	1.9	1.3–2.8	
Public service	94	67.0	2.6	2.2–3.2	
Private enterprise	26	50.0	IIII	1.3–2.9	

Table 6: Determinants of utilization of modern's contraceptives methods (rest).

Variables	Total	Utilization of method	PR	95%CI	p
Possession of radio					<0.001
Yes	839	31.2	1.7	1.3–2.2	
No	254	18.5	1		
Possession of TV					0.62
Yes	830	29.3	1.2	0.9–1.5	
No	263	25.1	1		
Living children					<0.001
≤3	507	17.0	1		
4-5	430	45.1	3.2	2.6–4.0	
≥6	159	19.5	1.2	0.8–1.7	
Level of knowledge					<0.001
Low	265	15.8	1		
Average	294	21.1	1.3	0.9–1.9	
Top	537	38.5	2.4	1.8–3.3	
Attitude					<0.001
Favorable	703	42.7	15.1	8.4–27.2	
No favorable	389	2.8	1		
Discussion of spouse					<0.001
Frequently	652	68.1	8.9	5.8–13.8	
Rarely	394	12.2	1.6	0.9–2.7	
Never	249	7.6	1		
Support of spouse					<0.001
Yes	540	46.7	4.4	3.4–5.7	
No	555	10.6	1		

chance, those aged 40 to 44 had a close, those aged 40 to 44 had a close against six more chance to use methods; those between 45 and 49 had five times the chance of being used modern contraception than their older pairs of 24 years. Women who had levels of academic study, using more contraceptives than those who had the primary level of study.

Catholic women had twice the chance of using the methods as revivalist churches (PR: 2.25; 95%CI: 1.7, 3.0); Protestant also had twice the chance; Muslim women, and Kimbanguistes all had 2 times more likely to use modern contraceptive methods that revivalist churches faithful. Women working in public company, public service and private company had respectively 2, 3 and 2 times the chance to make use of modern contraception than those dealing only their households. Women whose households had a radio, had nearly twice the chance to use the methods that their peers whose households did not own. This association is absent in women who had the TV. The association was positive between the use of modern contraceptive methods and the number of living children for women who were between 4 and 5 living children. The chance to use the methods varies with the level of knowledge of methods for those who had a high level of knowledge (Table 6).

The favorable attitude to contraception was significantly associated with the use of modern contraception (PR: 15.0; 95% CI: 8, 38; 27, 19); Women who frequently discuss with their spouses, were nearly 9 times the chance to use the methods as never discussed; Similarly, women who had the support of spouses, had four times the chance to use the methods that those not receiving such support.

The results of this study revealed a modern contraceptive prevalence of 28.4% among the women surveyed. This prevalence is higher than that reported in the report of the DHS DRC II 2013-2014 in urban area, which was 14.6% and in the city of Kinshasa, the capital of DRC, which was 19% [7]. DRC is a vast country; it is not possible that a result is applicable to all cities because every corner of the country has its demographic and socio-cultural characteristics that are unique. Kinshasa packed all these features, so that it would make it difficult to very fair explanation. Lubumbashi borders with Zambia where contraceptive prevalence is high, at 39.9% [2]. The same author has estimated at 22.9% contraceptive prevalence in Congo, a result that is opposable to ours. In 2012 it was estimated at 19% in Central Africa [14], also lower than our results.

However, 12.3% of women did not use contraception for fear of side effects. This result is those of Ali and Cleland who were aware that in developing countries, 20 to 30% of women using the pill

and injectable, stop the turn of two years because of side effects or because of other health problems. The author suggests that many of these women could then benefit from contraception to long-acting or permanent [15]. This applies to women in Lubumbashi who use less recent methods.

As for predictors of the use of modern methods, we observed a significant association between the age of women and the use of contraception. More women get older, the more it increases the chance to use: women with ages between 30 and 34 years, were more likely to use modern contraceptive methods than their older pairs of 24 years or less; those who were aged between 35 and 39 years, had four times the chance, those aged 40 to 44 had a close against six more chance to use methods; those between 45 and 49 had five times the chance to use modern contraception than their older pairs of 24 years at most. This association was found by Saurina C. et al in Catalonia for the age groups above 35 years [16]. So in Lubumbashi pretty young women begin contraception; in this case it would be mainly for the puPRose of spacing births, compared to the number of desired children and living. However, several authors found no association in their studies [15,17-19].

Women who had levels of academic study, using more contraceptive methods than those who had the primary level of study. This significance was also observed by several authors: In Ghana, Asamoah BO et al [17]; in the Butajira area of Ethiopia by Mekonnen and Worku [20]; in India by Saurabh and Prateek [21]; in Zambia by White J and Speizer S [22]; in Zambia and Kenya by Do M and Hotchkiss [23]. This is the need to educate women optimally because it would give them the ability to decide and to aspire to a quality of life and therefore, to assume, according to the results of Najafi-Sharjabad F et al found in Asia [24].

As the religion of women, we observed that Catholic women had twice the chance to use the methods as revivalist churches; Protestant also had twice the chance; Muslim women, and Kimbanguistes all had 2 times more likely to use modern contraceptive methods that revivalist churches faithful. These results are consistent with those obtained in Malawi [25] and India [21]; but are contrary to those found in Ethiopia [26,27] and Kenya and Zambia [23]. This difference is linked to religious values that different confessions attributed to the occurrence of pregnancy. Some people would attribute this question to the divine will, which would be an obstacle to the use of effective contraception. We believe that the accession of religions to contraception could boost the use of effective contraceptive methods. The Christian religion would support the promotion of natural methods, not yet very effective to bring goods made to users.

Women working in public enterprises, public service and private enterprise had respectively 2, 3 and 2 times the chance to make use of modern contraception than those dealing only their households. These results are similar to those obtained in Kenya and Zambia, saying the women who had occupied the 12 months longer used contraceptive methods than women who had no occupation [23]. This could be explained by the fact that so important is the occupation, stringent are the requirements relating thereto and stronger is the need to space births and to use contraception.

Women whose households had a radio, had nearly twice the chance to use the methods that their peers whose households did not own. This association is absent in women who had the TV. This is explained by exposure to different awareness messages of contraception, as shown Okigbo C. et al [28]. The association was positive between the use of modern contraceptive methods and the number of living children for women who were between 4 and 5 living children. These results are similar to those found in Zambia, which showed a growing association with the number of children: one child; two children; three children and four more children [22]. However, this shows that women prefer to have a number of children before starting contraception. Or the use of contraception should not expect that.

The chance to use the methods vary with the level of knowledge of methods: PR was 2.43 (CI: 1.81; 3.27) for those who had a high level of knowledge. This result is that of Khan et al. (2007), Sajid & Malik (2010) and Wu (2010), relayed by Najafi Sharjabad-F et al, showing that the lack of knowledge of modern contraception in the limit to use[24]; So the opposite is true. This is the need for communication about contraception with women and men, as it can also shape attitudes. The results revealed that the favorable attitude to contraception was significantly associated with the use of modern contraception. Similar results were found in Zambia, revealing that women who had a favorable attitude were more likely to use modern contraception.

Women who frequently argued with their spouses, were nearly 9 times the chance to use the methods as never discussed; Takele A, Degu G and Yitayal M had found the same thing in Ethiopia that women who routinely talked with their spouses, using more methods than those who never discussed and in Butajira district in Ethiopia, Mekonnen W and Worku A [20,26].

Moreover, women who had the support of spouses, had four times the chance to use the methods that those not receiving such support. This ties Akelo et al, who found a significant association between the use of contraception and the approval of the partner [19]. So spouse should be involved at the highest point to boost the contraceptive prevalence. The adjustment of these factors in a model could eliminate to generate more and more explanatory only.

Conclusion

This study showed that modern contraceptive prevalence was 28.4% in the city of Lubumbashi, near the married women. The predictors of the use of modern methods were age of women (≥ 30 years); The level of study, the Catholic religious denominations, Protestant, Muslim and Kimbanguistes, formal occupations such as public company, public service and private company, owning a radio and possession 4-5 living children, the high level of knowledge of the methods, the positive attitude, the current discussion with spouses and spousal support. These factors could be promoted to boost the use of modern contraceptive methods by women in marital union in the city of Lubumbashi.

References

1. OMS et USAID. Le repositionnement de la Planification Familiale: Directives pour actions de plaidoyer. Genève. 2008.

2. Ahmed S, Li O, Liu L, O Tsui A. Maternal deaths averted by contraceptive use: an analysis of 172 countries. Lancet. 2012; 380: 111–125.

3. Osotimehim B. Family planning save lives, yet investments falter. Lancet. 2012; 380: 82-83.

4. Babalola S, Fatusi A. Determinants of use of maternel health services in Nigeria-looking beyond individidual household factors. BMC pregnancy and child health. 2009; 9: 43.

5. Ministère du plan, Macro International. Enquête démographique et de santé, République Démocratique du Congo 2007. Calverton, Maryland, USA: Ministère du plan et Macro International, Kinshasa RDC. 2008.

6. Institut National de la Statistique. Fonds des Nations Unies pour l'Enfance Enquête par Grappes à Indicateurs Multiples en République Démocratique du Congo 2010 (MICS-RDC 2010): Rapport Final. Kinshasa. RDC. 2011.

7. Ministère du Plan et suivi de la mise en œuvre de la modernité. Deuxième enquête démographique et de santé (EDS-RDC II 2013-2014): Rapport préliminaire, Kinshasa, RDC. 2014.

8. Ezeh AC, Bongaarts J, Mberu B. Global population trends and Policy options. Lancet. 2012; 380: 142-48.

9. Ministère du plan. Document de la stratégie de croissance et de réduction de la pauvreté-DSCPR 2. Kinshasa, RDC. 2011.

10. Ministère de la Sante. Planification familiale : plan stratégique national à vision multisectorielle 2014-2020. Kinshasa, RDC. 2014.

11. Chenge M, Van der vennet J, Porignon D, Luboya N, Kabyla I, Criel B. La carte sanitaire de la ville de Lubumbashi, République Démocratique du Congo Partie I : problématique de la couverture sanitaire en milieu urbain congolais. Global Health Promotion. 2010; 17: 63-74.

12. Ancelle T. Statistique épidémiologie. 2ème éd, Maloine, Paris. 2006.

13. Savu A, Liu Q, Yasui Y. Estimation of relative risk and prevalence ratio. Statist Med. 2010; 29: 2269–2281.

14. Dorroh JE, Singh S. Trends in contraceptive need and use in developing countries in 2003, 2008, and 2012: an analysis of national surveys. *Lancet.* 2008; 381: 1756–1762.

15. Alemayehu M, Belachew T, Tilahun T. Factors associated with utilization of long acting and permanent contraceptive methods among married women of reproductive age in Mekelle town, Tigray region, north Ethiopia. BMC Pregnancy and Childbirth 2012; 12: 6.

16. Saurina C, Vall-ilosera L, Sarez M. Factors determing family planning in Cata lonia, sources of inequity. Internation Journal for equity in health. 2013; 11: 35.

17. Asamoah BO. Inequality in fertility rate and modern contraceptive use among Ghanaian women from 1988–2008, International Journal for Equity in Health. 2013; 12: 37.

18. Ayoola AB, Zandee G, Johnson E, Pennings K, Johnson RW. Contraceptive Use among Low-Income women Living in medically underserved neighborhoods. JOGNN. 2014; 43: 455-464.

19. Akelo V, Girde S, Borkowf CB, Angira F, Achola K, Lando R, et al. Attitudes toward Family Planning among HIV-Positive pregnant Women Enrolled in a Prevention of mother-To-Child Transmission Study in Kisumu, Kenya, PLoS One. 2013; 8: e66593.

20. Mekonnen W, Worku. A Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. Reproductive Health. 2011; 8: 37.

21. Prateek SS, Saurabh RS. Contraceptive practices adopted by women attending an urban health centre. African Health Sciences. 2012; 4: 416-421.

22. White JS, Speizer IS. Can family planning outreach bridge the urban-rural divide in Zambia? BMC Health Services Research. 2007; **7**: 143.

23. Do M, Hotchkiss D. Relationships between antenatal and postnatal care and post-partum modern contraceptive use: evidence from population surveys in Kenya and Zambia. BMC Health Services Research. 2013; 13: 6.

24. Najafi-sharjobad F, Syed Yahya SZ, Rahman HA, Hanafiah M, Manf RA. Barriers of modern contraceptive practices among Asian women: a mini literature review. Global Journal of health science. 2013; 5: 181-192.

25. Yeatman SE, Trinitapoli J. Beyond Denomination: The Relationship between Religion and Family Planning in Rural Malawi. Demogr Res. 2008; 19: 1851–1882.

26. Takele A, Degu G, Yitayal M. Demand for long acting and permanent methods of contraceptives and factors for non-use among married women of Goba Town, Bale Zone, South East Ethiopia. Reproductive Health. 2012; 9: 26.

27. Lakew Y, Reda A, Tamene H, Benedict S, Deribe K. Geographical variation and factors influencing modern contraceptive use among married women in Ethiopia: evidence from a national population based survey. Reproductive Health. 2013; 10: 52.

28. Okigbo C, Speizer IS, Corron M, Gueye A. Exposure to family planning messages and modern contraceptive use among men in urban Kenya, Nigeria, and Senegal: a cross sectional study. Reproductive Health. 2015; 12: 63.